THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States issued on the first of each month from March to December, inclusive.

Volume 9 September 1, 1929 Number 7

BUREAU OF ENTOMOLOGY
UNITED STATES
DEPARTMENT OF AGRICULTURE
AND
THE STATE ENTOMOLOGICAL
AGENCIES COOPERATING

I N S E C T P E S T S U R V E Y B U L L E T I N

Vol. 9 September 1, 1929 No. 7

OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR AUGUST, 1929

The Mediterranean fruit fly inspection during the month disclosed infestations on only seven properties. One of these, at Inverness, Citrus County, brought in a county in which infestation had not previously been determined. During the month very few adults or larvae have been found even within the older centers of infestation.

During the late summer grasshoppers became generally destructive over the greater part of the East Central, West Central, and North Central States with rather heavy damage in scattered localities throughout the region of the Rocky Mountains and the Great Basin.

Very heavy losses due to the depredations of wireworms on potatoes and grain have occurred in southwestern Idaho. In one single potato plantation the actual loss caused by reduction in grade due to wireworm injury amounted to $125 per acre.

A serious outbreak of the bertha armyworm, apparently more intense in the northeastern corner of the State, is reported from the northern third of North Dakota.

A preliminary survey of the Hessian-fly situation in New York indicates that in the important wheat-growing counties the infestation is extremely light, only about 1.3 per cent of the straws, on an average, being infested.

The corn root worm is causing severe lodging of corn in many localities in the East Central and West Central States.

A report from Georgia indicates that the apple maggot was found for the first time in that State in August.

The oriental fruit moth is reported as generally serious from Connecticut southward to Georgia and westward to Illinois and Mississippi. In many parts of this region the percentages of infestation ran very high. Reports from the Bureau of Entomology's laboratory at Moorestown, N. J., indicated that parasitism in that district was running from 80 to 100 per cent.

The Mexican bean beetle is still being reported as generally very destructive over the entire infested territory.

The banded cucumber beetle has been found quite numerous at Vista, Calif., and it appears to be moving northward in that State.

A species of tussock moth (Hemerocampa pseudotsugata McD.) is defoliating and killing large areas of Douglas fir in the Payette National Forest in Idaho.

This season seems to be one of unusual abundance of the bagworm throughout the Middle Atlantic and East Central States westward to Kansas.

The fall webworm is decidedly more abundant throughout New England, New York State, and Missouri this year.

The pine butterfly is very abundant over large areas of the Payette National Forest in Idaho, which may indicate the approach of another epidemic.

A very serious infestation of the sheep botfly is reported from Arizona, where, out of a flock of 9,000 sheep, 1,200 were killed.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR AUGUST, 1929.

Local outbreaks of the bertha armyworm have been reported from sections of southern Manitoba and southern Alberta, chiefly affecting sweet clover, alfalfa, and flax.

The greasy cutworm occurred in outbreak form in the St. John River Valley, New Brunswick, affecting a variety of field and garden crops. A brief survey of potato fields for 30 miles south and 80 miles north of Fredericton along the St. John River Valley showed that injury was most common in the region near Fredericton and was seemingly confined to the broad valley extending from Oromocto to Zealand.

The worst infestation in some years of the cabbage flea beetle is being experienced all over Vancouver Island, British Columbia.

Reports indicate that the wheat stem maggot is widespread over the western half of Manitoba.

Outbreaks of turnip and cabbage aphids have been reported from sections of New Brunswick, southern Ontario, and the Okanagan Valley of British Columbia.

Larvae of the plum curculio have rarely been more abundant in early peaches in the Niagara district, Ontario. They have also been reported as causing considerable injury to plums locally in the Gaspereaux Valley, Nova Scotia.

Present indications are that the oriental peach moth will cause serious losses in peach orchards of the Niagara peninsula, Ontario, particularly in Niagara Township.

The green apple aphid has been present in outbreak form in the Annapolis Valley, Nova Scotia, and the Niagara district, Ontario. It also has caused considerable injury particularly to young trees in the Okanagan Valley, British Columbia. In addition, the black cherry aphid caused severe injury to sweet cherries in the Niagara district, and the rosy apple aphid has been abundant in the eastern Annapolis Valley, Nova Scotia.

Tussock moths are widespread in the Annapolis Valley, Nova Scotia, and are causing considerable damage by gnawing holes in the fruit in apple orchards.

The fall webworm is present in conspicuous numbers in many sections of Nova Scotia and Ontario and in the Lower Fraser Valley, British Columbia.

The apple sucker has been recorded for the first time in the St. John River Valley, New Brunswick, outbreaks having been discovered in western Kings County.

The apple and thorn skeletonizer is widespread in the Annapolis Valley, Nova Scotia, and has also been found in neglected apple orchards at Grimsby and Beamsville in the Niagara district, Ontario.

The outbreak of the hemlock looper on the North Shore of the St. Lawrence, about 50 miles below the mouth of the Manacouagan River, at Trinity Bay, Quebec, is extending very rapidly and probably about 1,000,000 cords of balsam spruce pulpwood are being destroyed. Other outbreaks of this species in balsam pulpwood stands are in progress at Godbout and Pentecote on the North Shore, and are reported from other valleys along the coast of the St. Lawrence River and the Gulf of St. Lawrence, extending as far as Labrador.

An outbreak of a species tentatively determined as the black-headed tip moth (Peronia variana Fern.) is affecting balsam and spruce over an area of 200 square miles in southern Cape Breton Island, Nova Scotia. Seventy per cent of the trees are infested and severe injury is being done during the present season. This is the first year that this species has appeared in outbreak form.

A very extensive outbreak of the jack-pine sawfly (Neodiprion banksiana Rohwer) has been reported from the Capreol district of northern Ontario.

Scouting for the gipsy moth in the Province of Quebec this season has failed so far to reveal any evidence of the pest.

G E N E R A L F E E D E R S

GRASSHOPPERS (Acrididae)

Florida — J. R. Watson (August 21): Grasshoppers are moderately abundant and doing considerable damage to young citrus trees.

Indiana — J. J. Davis (August 1): Reported riddling flower-garden plants at Michigan City.

Illinois — S. C. Chandler (August 14): Moderately abundant at East St. Louis.

W. P. Flint (August 19): Quite a little damage to red-clover fields is occurring in the west central counties of the State. The damage is not general, but indicates an upturn in the abundance of these insects. Melanoplus atlanis Riley and M. differentialis Thos. are present.

Minnesota — A. G. Ruggles (August 24): Grasshoppers seem to be very abundant in parts of the State and should have a good start next year. It is very dry in some areas.

North Dakota — J. A. Munro (August 23): Grasshoppers are very abundant, attacking alfalfa, grain, and garden crops in limited areas of Ward, McLean, Burleigh, Morton, and Golden Valley Counties.

Nebraska — M. H. Swenk (July 15-August 1): Grasshoppers continued active in gardens near Lincoln the latter part of July. Injury to alfalfa in Buffalo and Logan Counties was reported the third week of July.

Kansas — J. W. McColloch (August 17): Considerable damage has been reported from Macksville and Belleville. At both places the damage was a general invasion of many types of plants. (August 25): Melanoplus differentialis Thos., M. atlanis Riley, and M. bivittatus Say are moderately abundant to very abundant in northwestern Kansas.

Arkansas — D. Isely (August 22): Melanoplus differentialis Thos., M. femur-rubrum DeG., and M. atlanis Riley are moderately abundant over the whole State.

Montana — W. B. Mabee (August 20): Melanoplus femur-rubrum DeG. and M. mexicanus bivittatus Say are moderately abundant in the eastern half of the State.

Idaho — C. Wakeland (August 20): The relationship between grasshoppers and tachina parasites has been changing during the last two seasons. Since 1922 grasshopper infestations have been low and injury slight because of heavy parasitism. In 1928 parasites were noticeably less abundant and populations

of grasshoppers increased materially in many sections. This season parasites are few and grasshoppers are much more abundant. Injury is being done in many parts of Idaho, especially to small seed crops, and it appears likely that damage will be heavy and that extensive control measures will have to be undertaken.

Nevada — G. G. Schweis (August 20): Very aburdant in the eastern part of the State.

Utah — G. F. Knowlton (July 24): Very abundant 3 miles south of Joseph.

H. J. Pack (July 27): Very abundant in Tooele County.

Arizona — O. L. Barnes (August 16): Grasshoppers are moderately injurious to the tender foliage of young citrus.

WIREWORMS (Elateridae)

Nebraska — M. H. Swenk (July 15-August 1): Melanotus cribulosus Lec. was reported in corn roots the last half of July from Richardson and Madison Counties.

Idaho — C. Wakeland (August 20): Heavy losses have occurred to potatoes and corn as well as extensive injury to grains and other crops on which it is more difficult to tabulate losses. Many cornfields in southwestern Idaho have been planted two or three times and some of them abandoned, and in many fields the stand is 50 per cent or less. In a potato field examined last week, 5 carloads of rurals were dug on 12 acres. Of these, 1 carload graded U. S. No. 1, and 4 cars graded No. 2. The grower received for the car No. 1, $600, and for the 4 cars No. 2, $900. The reduction in grade was due entirely to wireworms, a loss of $1,500, or $125 per acre. This is typical of what is happening in many other instances.

Washington — W. W. Baker (August 21): Moderately abundant in Pierce and Grays Harbor Counties.

California — E. O. Essig (August 21): Moderately abundant.

BERTHA ARMYWORM (Barathra configurata Walk.)

North Dakota — J. A. Munro (August 7): There is an outbreak in Rolette Towner, Cavalier, Pembina, Walsh, and Ramsey Counties, and an isolated outbreak in Ward County. Fields of flax showed about 15 per cent injury and some sweet-clover fields were totally destroyed. In 1928 only Rolette and Towner Counties were seriously infested. It is very dry this season, which is a reverse of last. (August 23): Nelson, Grand Forks, and Burke Counties have been added to the list in which outbreaks are found.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

New York — C. R. Crosby (July 31): In a preliminary survey counts of 25 straws from each locality indicate the following infestation:

County	Number of localities	Average pereentage of straws infested.
Cattaraugus	1	0.0
Cayuga	10	2.8
Chautauqua	1	0.0
Erie	6	2.7
Genesee	11	0.7
Livingston	54	0.8
Monroe	13	2.2
Niagara	14	1.7
Onondaga	4	4.0
Ontario	6	0.7
Orleans	12	0.7
Seneca	9	0.9
Tompkins	5	1.6
Wayne	9	1.3
Wyoming	7	1.7
Yates	8	0.0

Average of entire region 1.3 per cent.

Maryland — P. D. Sanders (August 22): Scarce.

Illinois — S. C. Chandler (August 14): A survey of counties near East St. Louis shows 12 per cent of culms in stubble infested and 75 per cent parasitism.

Minnesota — A. G. Ruggles and assistants (August 16): Moderately abundant in Brown County.

Missouri — L. Haseman (August 26): Moderately abundant and threatens to prove destructive this fall.

Kansas — J. W. McColloch (August 25): Moderately abundant generally.

SMUT BEETLE (Phalacrus politus Melsh.)

Nebraska — M. H. Swenk (July 15-August 1): The smut beetle has been reported abundant in wheat fields in Morrill County the third week in July.

CORN

ARMYWORM (Cirphis unipuncta Haw.)

Minnesota — C. Matthews (August 18): Armyworm reported from Cottonwood County.

Iowa — C. N. Ainslie (July 27): Outbreaks seem numerous in northwestern Iowa. Each infested locality is rather small, only a few fields being invaded with no concerted movement in any general direction. Great variation in size of larvae, and many already mature and pupating in some numbers. Enemies are busy.

Nebraska — M. H. Swenk (July 15-August 1): The armyworm was the worst pest from July 22 to 29, appearing in four different areas in northeastern Nebraska and causing considerable loss to corn and oats. In all cases the worms started with the oats and when this was stripped, migrated to corn, which was injured less severely. In all cases the outbreaks occurred on land that was damaged by hail between June 15 and 25. The parasites began to control them about July 27 and their activities, with the completion of development of the worms, stopped the outbreaks with the close of July.

CORN EAR WORM (Heliothis obsoleta Fab.)

Massachusetts — A. I. Bourne (August 22): Somewhat more abundant than usual, being found moderately to very abundant.

Ohio — T. H. Parks (August 2): Very abundant in the early sweet corn near Columbus. Almost every ear is damaged. At Marietta the loss in early market corn was heavy. This is a repetition of the infestation of 1927 when early corn was infested more severely than late corn.

Illinois — W. P. Flint (August 19): Damage to tomatoes is heavy for this early in the season.

C. C. Compton (August 10): Occasional fields of corn in Cook County are infested as much as 3 per cent.

Nebraska — M. H. Swenk (July 15-August 1): Numerous reports of injury to tomato fruits were received during this period.

Kansas — J. W. McCulloch (August 25): Very abundant, many fields having as high as 95 per cent infestation.

Mississippi — C. Hines (August 21): Moderately abundant in Yazoo and Sharkey Counties.

Louisiana — W. E. Hinds (August 22): The corn ear worm is very abundant.

Texas — F. L. Thomas (August 23): The fourth generation is now causing injury in the southeastern section of the State.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

South Carolina — M. H. Brunson (August 29): Very abundant in Sumter, Lee, Partington, Florence, and Lexington Counties.

Mississippi — F. A. Smith (August 21): Abundant on young corn in Tate, Panola, and Quitman Counties.

C. Hines (August 21): Moderately abundant in overflowed areas in Yazoo, Sharkey, and Issaquena Counties.

R. W. Harned (August 22): A correspondent at Corinth reported on August 16 that this insect was destroying grass in a cowpea field at that place. Injury to corn and sugarcane has also been reported recently from Columbia, McComb, and Senatobia.

Texas — F. L. Thomas (August 23): This insect has ruined a number of late cane plantings in Fort Bend and Austin Counties.

STALK BORER (Papaipema nebris nitela Guen.)

Massachusetts — A. I. Bourne (August 22): Moderately abundant.

Connecticut — W. E. Britton (August 24): Seemingly more abundant than usual, reports of damage to corn, tomato, and dahlia in Durham, Winsted, Orange, New Haven, Hamden, and Waterford having been received.

Indiana — J. J. Davis (August 27): Specimens were received from North Manchester July 30 and Hammond August 9, attacking dahlia, and from Washington August 7, Salem August 14, and Aurora August 13, attacking corn.

Minnesota — A. G. Ruggles and assistants (August): Reported as moderately abundant in the southwestern part of the State.

Missouri — L. Haseman (August 26): Borers moderately abundant. Larvae are nearly mature and some are pupating, but a large percentage is failing to mature.

Nebraska — M. H. Swenk (July 15-August 1): Continued to receive reports of injury to corn, especially from Knox County. Also some reports from Butler, Cass, and Fillmore Counties.

Kansas — J. W. McColloch (August 20): Injury to corn was reported from Iola on July 20 and from Irving on August 2.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

New Hampshire — P. R. Lowry (August): No increase in infestation; all infested fields have less than 1 per cent of stubble attacked.

New York — Weekly News Letter, N. Y. State College of Agr., August 5: Damage can be plainly detected in Chautauqua County.

Michigan — R.H.Pettit (July 29): Reports from near Monroe state that Megilla maculata DeG. has been keeping the corn borer down appreciably.

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Mississippi — R. W. Harned (August 22): Serious injury to corn was reported from Liberty on July 13, and from Crystal Springs on August 1.

Arizona — O. L. Barnes (August 16): Considerable damage to young sorghum plants at the Sacaton Experiment Station has been reported.

CORN ROOT APHID (Anuraphis maidi-radicis Forbes)

Indiana — J. J. Davis (August 27): The corn root aphid was destructive to corn at Charlestown as reported on July 30.

Nebraska — M. H. Swenk (July 15-August 1): A 130-acre cornfield in BooneCounty was found heavily infested the third week in July.

CORN LANTERN FLY (Peregrinus maidis Ashm.)

Texas — F. L. Thomas (August 23): An insect, probably P. maidis, is appearing in very large numbers at the base of leaves and causing severe injury to late corn 6 miles south of Brazoria.

CORN ROOT WORM (Diabrotica longicornis Say)

Indiana — J. J. Davis (August 27): This insect was causing corn to fall at Newport as reported August 7.

Kansas — J. W. McColloch (August 20): Severe lodging of corn due to this worm has occurred at Junction City, Virgil, Ottawa, and Grenola.

Missouri — L. Haseman (August 26): Adult beetles are now appearing in great numbers throughout the State and some farmers are complaining of them and inquiring what they are.

SOUTHERN CORN STALK BORER (Diatraea zeacolella Dyar)

Maryland — P. D. Sanders (August 22): Reported from Baltimore on August 13.

South Carolina — M. H. Brunson (August 29): This insect is very abundant.

Kansas — J. W. McColloch (August 12): A bad infestation was found at Winfield.

CORN BILLBUGS (Sphenophorus spp.)

Missouri — L. Haseman (August 26): County agent A. J. Renner, of Benton, has reported an unusually serious outbreak of two species of corn billbugs on late corn in southeastern Missouri. He reports that they practically destroyed some fields of corn, which is very unusual for billbugs this late in the summer.

VELVET BEANS AND SOY BEANS

VELVET BEAN CATERPILLAR (Anticarsia gemmatilis Hbn.)

Florida — J. R. Watson (August 21): This insect has appeared as far north as Gainesville in destructive numbers, ragging up the velvet beans badly and also stripping soy beans.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

North Carolina — Z. P. Metcalf (August): Very abundant in the northeastern part of the State, especially on soy beans and peanuts.

COWPEAS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Georgia — O. I. Snapp (August 16): This insect is causing considerable damage to cowpeas at Barnesville.

SORGHUM

SORGHUM WEBWORM (Celama sorghiella Riley)

Texas — F. L. Thomas (August 23): Rather abundant in the eastern half of the State and causing injury as far south as DeWitt County.

CLOVER AND ALFALFA

CLOVER SEED MIDGE (Dasyneura leguminicola Lint.)

Minnesota — R. McCann (August 6): Abundant in red clover and moderately abundant in alsike in Lake of the Woods County.

Idaho — C. Wakeland (August 20): Less injurious than last season.

Washington — W. W. Baker (August 21): Moderately abundant at Puyallup.

GARDEN WEBWORM (Loxostege similalis Guen.)

Iowa — C. J. Drake (August 21): The garden webworm is doing a great deal of damage to alfalfa in the counties of Harrison, Page, Ringgold, and Shelby. A large number of new alfalfa fields have been completely devastated. Some damage is also done to corn and one farmer reported that a 30-acre field of soy beans had been totally destroyed.

Missouri — L. Haseman (August 27): The webworm is proving quite destructive to alfalfa in the west-central part of the State. At Columbia it has been fairly common but has done no serious damage. A brood of the worms is nearly mature at this date, August 27.

Kansas — J. W. McColloch (August 23): Severe injury to alfalfa has occurred at Olivet, Ellsworth, Glade, and Hays.

F R U I T I N S E C T S

APPLE

APHIDS (Aphiidae)

Massachusetts — A. I. Bourne (August 22): In a few cases a late-season infestation is appearing, especially on young trees.

New York — Weekly News Letter, N. Y. State College of Agr., August 19: Fruit in Niagara County will be reduced more by the rosy aphid and the green aphid than all other pests combined.

Minnesota — A. G. Ruggles and assistants (August): Aphids have been reported as very abundant on apple, plum, and shrubbery.

APPLE APHID (Aphis pomi DeG.)

Maine — C. R. Phipps (August 26): Moderately abundant on young trees.

Virginia — W. J. Schoene (August 26): In July a report was made of a severe infestation in apple orchards in several sections of the State. The aphids have now disappeared. The heavy infestation followed a spell of wet weather that caused succulent growth to terminals of bearing orchards. During the past few weeks the weather has been relatively dry.

CODLING MOTH (Carpocapsa pomonella L.)

New York — Weekly News Letter, N. Y. State College of Agr., August 5: Will be severe in poorly sprayed orchards in Ontario County.

Maryland — P. D. Sanders (August 22): Second-brood worms are becoming destructive.

Illinois — S. C. Chandler (August 14): First pupation occurred at Carbondale on August 6.

Missouri — L. Haseman (August 26): Codling moth is moderately abundant at Columbia, St. Joseph, Morrisonville, Waverly, etc. Second-brood worms are not so abundant as was expected, but bad enough.

Nevada — G. G. Schweis (August 20): This insect is causing injury to at least 75 per cent of the fruit near Reno.

Idaho — C. Wakeland (August 20): Height of emergence of second-brood moths occurred August 4 this year and July 23 last. Spring emergence was unusually early in relation to the development of apples, but an extended rainy, cool period following the calyx spray delayed and lessened development until infestation from first-brood moths was unusually light. Because of late emergence of second-brood moths, spraying has had to be continued late in many cases.

Washington — W. T. Baker (August 21): Moderately abundant in Pierce and Grays Harbor Counties.

E. J. Newcomer (August 21): Owing to the late season, the second brood is not so numerous as usual. Fruit should be cleaner than last year.

YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Ohio — E. W. Mendenhall (August 1): An outbreak has been found in a nursery on apple stock at Lancaster.

Indiana — J. J. Davis (August 27): Defoliated young apple trees at Morgantown August 6 and linden and apple trees at LaFayette August 12.

Missouri — L. Haseman (August 26): This worm has continued to appear in destructive numbers on young apple trees during the month. Newly hatched colonies were observed on August 26.

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

Ohio — E. W. Mendenhall (July 31): Found in apple stock in a nursery at Circleville. The trees are entirely stripped.

Missouri — L. Haseman (August 26): This worm has continued to appear in destructive numbers on young apple trees during the month.

APPLE AND THORN SKELETONIZER (Hemerophila pariana Clerck)

New York — Weekly News Letter, N. Y. State College of Agr., August 19: Has invaded the eastern portion of Niagara County, where injury is noticeable on unsprayed trees.

PISTOL CASE BEARER (Coleophora malivorella Riley)

West Virginia — L. M. Peairs (August 22): An unusual outbreak of this insect has been reported from Charlestown.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts — A. I. Bourne (August 22): Infestation was, as usual, rather spotty, the overwintering eggs in some orchards being very abundant and in others almost absent.

New York — Weekly News Letter, N. Y. State College of Agr., August 19: Injury is slight, but may be found in several orchards in Orange County.

Washington — E. J. Newcomer (August 21): These spiders appear to be more numerous than usual.

PACIFIC FLAT-HEADED BORER (Chrysobothris mali Horn)

Arizona — O. L. Barnes (August 16): We have had two complaints of severe injury to rose bushes. One apple orchard was damaged extensively. Several peach and apricot trees were killed and many others made worthless from the production standpoint. All reported from Phoenix.

ERMINE MOTH (Hyponomeuta malinellus Zell.)

New York — S. B. Fracker (July 24): From a letter from B. D. Van Buran. "Inspector J. A. Maney, while inspecting seedlings imported last winter and planted this spring in a nursery in Wayne County, found 20 nests of ermine moth caterpillars. Also found a few colonies the last of June and the first of July. Though these have been found every year for 15 years, the pest is not established so far as is known."

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Massachusetts — A. I. Bourne (August 22): Reports state that comparatively few railroad-worm flies have been seen as yet and these chiefly on early varieties. Some growers who have been considering this pest their worst for the last few years are not finding it at all serious this season.

New York — Weekly News Letter, N. Y. State College of Agr., August 5 and 19: Early apple varieties containing maggots may be found

in Dutchess County, but there are few in commercial orchards. A few flies still are seen on apple trees in Orange County. Maggots have done some damage to early varieties in at least one orchard in Ontario County.

Georgia — M. W. Yeomans (August 27): The apple maggot was found for the first time in the State at Blue Ridge this month.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia — O. I. Snapp (August 16): Infestation in the Georgia peach belt is lighter than usual at this season of the year.

Indiana — J. J. Davis (August 1): Reported killing peach trees at Milltown.

Nevada — G. G. Schweis (August 20): Moderately abundant at Reno, but no serious damage has been observed.

Kansas — J. W. McColloch (August 25): Moderately abundant to very abundant in districts where it occurs.

Arkansas — D. Isely (August 22): Moderately abundant in northwestern Arkansas.

Idaho — C. Wakeland (August 20): Much scale in commercial orchards this summer owing to excessively windy weather delaying dormant spraying so much that some of the growers had to stop spraying because foliage was too far advanced.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

New York — Weekly News Letter, N.Y. State College of Agr., August 5 and 19: This insect is reported in sufficient numbers to cause trouble if the proper conditions exist in Niagara, Ulster, and Ontario Counties.

RUSTY LEAF MITE (Phyllocoptes schlechtendali Nal.)

Washington — E. J. Newcomer (August 21): This mite is very numerous on pear and prune in the Yakima Valley and is doing considerable damage. The leaves of pear trees are curled and browned, while the leaves of prunes curl upward and some of the fruit drops.

KATYDIDS (Locustidae)

Maryland — P. D. Sanders (August 23): Katydids have done about 12 per cent damage to ripening Bartlett pears in a commercial orchard.

PEACH

PEACH BORER (Aegeria exitiosa Say)

New York — Weekly News Letter, N. Y. State College of Agr., August 5: Adults are emerging in Orange County.

Georgia — M. S. Yeomans (August 27): Adults are emerging in moderate abundance.

C. I. Snapp (August 6): Infestation is very heavy at Talbotton as a result of improper use of paradichlorobenzene. Many trees in two orchards are dying.

Alabama — T. A. Ruffin (August 26): Very abundant.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Connecticut — P. Garman (August 24): Reported as attacking peach in New Haven and Hartford Counties. Increasing in abundance in some sections and decreasing in others. Macrocentrus sp., Eubadizon sp., and Glypta rufiscutellaris Cress. have been observed attacking the larvae.

New York — Weekly News Letter, N.Y. State College of Agr., August 5 and 19: Injury is severe in some orchards in Niagara County and is also noticeable in Dutchess and Ulster Counties.

New Jersey — L. B. Smith (August 27): The fruit infestation in this district (Moorestown) as obtained from counts of 11,000 peaches in 14 orchards has been:

Greensboro	3 per cent	July 13 to 17.
Carmen	3 " "	July 30 to August 7
Hiley	11 " "	August 12 to 22
Elberta	11 " "	August 21 to 22.

Invisible injury in midseason peaches runs higher than the visible, being 8 per cent in the Hiley and 9 per cent in the Elberta. Observations made at the oriental peach moth laboratory indicate that parasitism of the twig-infesting larvae continues very high as during the past three years, averaging for the south Jersey peach district approximately 80 per cent; 100 per cent parasitism has been obtained from numerous midseason collections. Macrocentrus ancylivora Rohw. remains the dominant species. M. delicatus Cress. is much more abundant than heretofore, and is the second most important species. Glypta rufiscutellaris Cress. is much less abundant than last year. The egg parasite Trichogramma minutum Riley has so far attained less than 10 per cent parasitism, with an exceedingly spotty distribution.

Pennsylvania — T.L.Guyton (August 21): Moderately abundant over the State.

Maryland — P. D. Sanders (August 23): More numerous than last year at this time. Some orchards are more seriously injured than others.

Virginia — W. J. Schoene (August 26): This insect is taking its toll in the various peach sections where it is established. Damage ranging as high as 15 to 20 per cent is not unusual.

West Virginia — L. M. Peairs (August 22): Very abundant all over the State. Now emerging.

North Carolina — Z. P. Metcalf (August): Very abundant over the State.

C. H. Brannon (August 20): Caused serious injury to apple twig tips in a large block of trees in Henderson County.

South Carolina — M. H. Brunson (August 29): Very destructive, especially in the upper Piedmont section of the State.

Georgia — O. I. Snapp (August 16): Reports of considerable damage in orchards in the northern part of the State have been received at the laboratory. Considerable twig injury to nonbearing trees was observed today at Thomastown and Crest.

M. S. Yeomans (August 27): Found in great abundance breeding in apples.

Ohio — E. W. Mendenhall (August 2): Very destructive in Fairfield County, especially in some of the large orchards.

Indiana — J. J. Davis (August 27): Was found at LaFayette and Anderson during the month.

Illinois — S. C. Chandler (August 14): Fourth-brood larvae began entering the fruit shortly before Elberta harvest. Infestation in Pulaski County, the point of first-discovered infestation, is about the same as in 1928. An increase in fruit infestation in the other peach sections of southern Illinois has been noted according to results of a survey made just previous to harvest, but no commercial damage will occur in Elberta outside of Pulaski County.

W. P. Flint (August 19): Infestation was about the same in extreme southern Illinois as it was last year, Elbertas at harvest time showing from 20 to 25 per cent infestation.

Kentucky — M. L. Didlake (August 27): This insect is very abundant on peach, plum, and young apple trees in many widely scattered localities.

Alabama — W. A. Ruffin (August 26): This insect is very abundant.

Mississippi — R. W. Harned (August 22): Peach twigs that have evidently been injured by the larvae have been received during the past month from Hinds, Pike, Prentiss, Coahoma, Tippah, and Yazoo Counties. (August 28): Found in the following new localities: Columbus, West Point, Aberdeen, and Kettleton. Reported by Mr. M. R. Smith.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Maine — C. R. Phipps (August 26): Moderately abundant over the State.

Massachusetts — A. I. Bourne (August 22): The plum curculio continues to be the outstanding problem generally over the State. With few exceptions, it appears to be fully as serious as in 1928 and some growers have reported it to be worse. Many of the growers are applying the special 10-day spray.

Connecticut — P. Garman (August 24): The plum curculio has been reported as attacking apple in New Haven County in greater numbers than at this time last year.

New Jersey — T. J. Headlee (August 1): The plum curculio is moderately abundant.

Maryland — P. D. Sanders (August 23): Has been abundant on the Eastern Shore until this time.

Virginia — W. J. Schoene (August 26): The outstanding damage during August was the outbreak in the peach section of Albemarle County. Many reports were received from the peach sections of the State during the early months of the summer, but with the exception of Albemarle County the damage was ended in the early part of the season. This insect became unusually numerous, causing heavy losses to the peach growers. This is the only outbreak in Virginia for many years.

North Carolina — Z. P. Metcalf (August): Very abundant over the State.

South Carolina — M.H. Brunson (August 29): Very abundant in various sections of the State.

Georgia — O. I. Snapp (August 16): Many growers are using post-harvest applications to reduce the source of infestation for the next season. Unless a systematic program of control measures is enforced between now and the harvest of the 1930 peach crop, another heavy loss is expected. Georgia peach orchards are now harboring the heaviest population of adults in years.

Illinois — S. C. Chandler (August 14): There has been much late injury in peaches in southern Illinois, running as high as 20 per

cent in some sprayed orchards. Jarring records in sprayed and unsprayed orchards showed the maximum number of curculios July 29, about one week before the start of the Elberta harvest. Just as the harvest started a big drop took place in the number. This has taken place every year since jarring records have been made in the State.

Kentucky — M. L. Didlake (August 27): Moderately abundant generally on peach and plum.

Alabama — W. A. Ruffin (August 26): This insect is very abundant.

Arkansas — D. Isely (August 22): The plum curculio is very abundant.

RASPBERRY

RASPBERRY FRUIT WORM (Byturus unicolor Say)

Michigan — R. H. Pettit (July 29): Raspberry fruit worms have been very prevalent in the southwestern corner of the State and have done appreciable damage to basket and canning red raspberries. The infestations are spotted up to the present. The worst damage seems to be in Berrien and Van Buren Counties.

GRAPE

EIGHT-SPOTTED FORESTER (Alypia octomaculata Fab.)

Nebraska — M. H. Swenk (July 15-August 1): On July 26 a report of severe damage to grapevines was received from Benedick.

ACHEMON SPHINX (Pholus achemon Drury)

Arizona — O. L. Barnes (August 16): Achemon sphinx adults and larvae have been reported on grapevines and Virginia creeper in Phoenix.

GRAPE LEAFHOPPER (Erythroneura comes Say)

Nebraska — M. H. Swenk (July 15-August 1): Grape and woodbine vines were reported to be heavily attacked in central Nebraska during this period.

BLUEBERRY

CHAIN-SPOTTED GEOMETER (Cingilia catenaria Drury)

Maine — C. R. Phipps (August 26): An outbreak has been observed in Cumberland County, where many acres of blueberry land has been defoliated.

PECAN

AN APHID (Myzocallis fumipennellus Fitch)

Georgia — T. L. Bissell (August 23): This aphid is more abundant than in 1928 at Barnesville, but as yet no appreciable damage has been observed.

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Georgia — T. L. Bissell (August 23): A small number of pecans continue to drop because of shuck-worm injury. There will be a heavy infestation at Experiment and Barnesville by the last generation in nuts gathered at harvest. Some Stuart pecans are found with deformations in the shell caused by shuck worms.

Mississippi — R. W. Harned (August 22): More complaints in regard to injury to pecans have been received at this office than during any time in recent years.

FALL WEBWORM (Hyphantria cunea Drury)

Mississippi — R. W. Harned (August 22): The second generation appeared early in August and seems to be slightly heavier in most sections that the first generation.

C. Hines (August 21): The second generation is now very abundant in Yazoo, Madison, Sharkey, Humphreys, and Issaquena. Counties, The first specimens of this generation were found on August 9.

G. I. Worthington (August 22): Found on peach and apple at Shelby and general on pecan and persimmon over the Delta.

Louisiana — W. E. Hinds (August 22): Very abundant on pecan and wild growth.

PECAN WEEVIL (Balaninus caryae Horn)

Georgia — T. L. Bissell (August 23): Emergence of adults from the soil around Experiment and Barnesville continues and there continues to be feeding in the later maturing varieties of pecans with consequent shedding of nuts. Weevils have started ovipositing in Stuart pecans, the first eggs being found August 20. Infestation of Stuarts appears to be about the same as in 1928; of Schley, about one-half as heavy.

A CURCULIO (Conotrachelus sp.)

Georgia — T. L. Bissell (July 26): A species of Conotrachelus has been ovipositing in pecan nuts at Experiment and Barnesville.

Oviposition and subsequent feeding by the larvae cause nuts to drop prematurely. The first drops caused by this insect were found July 3. Of 1,318 premature drops collected at Barnesville July 3 to 17, 9 per cent were infested by Conotrachelus.

HICKORY NUT CURCULIO (Conotrachelus affinis Boh.)

Mississippi — R. W. Harned (August 22): A large number of complaints in regard to an insect that has been tentatively identified as C. affinis and that has caused pecans to drop from the trees have been received during the past few weeks.

FIG

A GREEN JUNE BEETLE (Cotinis texana Casey)

Arizona — O. L. Barnes (August 16): The green peach beetle is abundant in the Salt River Valley and in many cases serious injury has been reported to figs, peaches, and grapes.

POMEGRANATE

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

Arizona — O. L. Barnes (August 16): Nymphs were observed in moderate numbers on pomegranates near Phoenix. The injury to pomegranates was severe last year.

CITRUS

MEDITERRANEAN FRUIT FLY (Ceratitis capitata Wied.)

Florida — Plant Quarantine and Control Administration (August 31): The inspection during the month disclosed infestation on only seven properties. One of these in Inverness, Citrus County, brought in a county in which infestation had not previously been determined. Extensive inspection and trapping have failed to disclose infestations other than those mentioned above, and during the month very few adults or larvae have been found, even within the old centers of infestation. Under date of August 20, the Secretary approved a revision of the quarantine and regulations which becomes effective September 1. The new quarantine establishes an eradication area which includes those areas previously defined as infested and protective zones. The eradication area as defined in the quarantine includes the entire counties of Brevard, Citrus, Flagler, Hernando, Hillsborough, Lake, Marion, Orange, Pasco, Pinellas, Putnam, Seminole, Sumter, and Volusia. Also all of St. Johns

County except parts of two townships in the northeastern corner, four townships in the southeastern part of Duval County, the eastern half and the southwestern corner of Clay County, about one township in the southeastern corner of Bradford County, the two eastern tiers and parts of the two southern tiers of Alachua County, the eastern third of Levy County, all of Osceola County except the southern two tiers of townships, and all of Polk County except four townships in the southeastern corner.

During the month, field scouting has been continued in the Southern and Western States. No field infestation or infested fruit has been found as a result of this scouting.

A PYRALID (Myelois venipars Dyar)

Arizona — O. L. Barnes (August 16): This insect has been reported from scarce to moderately abundant in several groves of navel oranges in the Salt River Valley. In most cases it attacked diseased or injured fruit. All infestations reported were in navel oranges.

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Florida — J. R. Watson (August 21): More abundant than for several years.

Louisiana — W. E. Hinds (August 22): The citrus whitefly is very abundant.

T R U C K - C R O P I N S E C T S

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Mississippi — R. W. Harned (August 22): Many complaints have been received recently regarding injury to peas and butterbeans from practically all sections of the State.

POTATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Illinois — C. C. Compton (August 15): The Colorado potato beetle is less abundant than normal in Cook County.

Minnesota — A. G. Ruggles and assistants (August): This insect is reported as moderately abundant over most of the southern third of the State and it is reported as very abundant in Polk, Carlton, and Aitkin Counties.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

New Hampshire — P. R. Lowry (August): Beetles are quite common in many potato fields visited in Merrimack County.

Massachusetts — A. I.Bourne (August 22): Prof. Whitcomb reports this insect very abundant on potatoes and tomatoes.

Washington — W. W. Baker (August 21): Adults are very abundant in some potato fields in Lewis, Grays Harbor, Thurston, Pacific, and Mason Counties. No observations have been made in any other counties excepting Pierce and King, where there are moderate infestations. Some tuber injury is present in all fields examined.

A FLEA BEETLE (Epitrix subcrinita Lec.)

Washington — W. W. Baker (August 21): Found in all potato fields examined but in no case did the abundance equal that of E. cucumeris Harr. (See above note.)

MOLE CRICKETS (Gryllidae)

Kentucky — M. L. Didlake (August 27): Mole crickets are seriously damaging potato tubers at Ashland.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Maine — C. R. Phipps (August 26): Moderately abundant over the State.

New Hampshire — P. R. Lowry (August): Hopperburn combined with long drought is seriously injuring many plots of potatoes in Merrimack County.

Massachusetts — A. I. Bourne (August 22): This insect is becoming very abundant.

Minnesota — A. G. Ruggles and assistants (August): This insect has been reported as moderately abundant over most of the southern third of the State and it is reported as very abundant in Polk, Carlton, and Pipestone Counties.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

Missouri — L. Haseman (August 26): Along with the rather severe epidemic of the imported cabbage worm, the cabbage looper has continued to do considerable damage during the month.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Florida — J. R. Watson (August 21): The harlequin bug is moderately abundant.

Mississippi — R. W. Harned (August 22): Serious injury to cabbage was reported on August 5 from Meridian. A correspondent at Kilmichael wrote on August 8 that these insects were seriously injuring collards and other garden plants.

Louisiana — W. E. Hinds (August 22): This insect is moderately abundant.

Arkansas — D. Isley (August 22): Moderately abundant over the State.

CABBAGE APHID (Brevicoryne brassicae L.)

Illinois — C. C. Compton (August 1): Occurring in fewer than normal numbers in Cook County owing to long, heavy parasitism.

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

Massachusetts — A. I. Bourne (August 22): Prof. Whitcomb reported that this insect appeared early and probably caused more loss than usual because of delay in applying treatment.

STRAWBERRY

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Massachusetts — A. I. Bourne (August 22): Prof. Whitcomb reported, "Many strawberry plantings are heavily infested in spots. Eggs were exceedingly abundant on June 22."

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

Indiana — J. J. Davis (August 27): This insect is abundant at Kokomo as reported August 7.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

South Carolina — M. H. Brunson (August 29): Moderately abundant. Now found in Bamberg, Orangeburg, Barnwell, Saluda, Calhoun, and Aiken Counties.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Connecticut — W. E. Britton (August 24): Specimens have been found in Darien, Sherman, Orange, and Monroe.

New York — Weekly News Letter, N.Y. State College of Agr., August 5: The Mexican bean beetle is doing much damage in isolated spots in Chautauqua County.

New Jersey — T. J. Headlee (August 1): The Mexican bean beetle is moderately abundant and damage is heavy in some places.

Pennsylvania — T. L. Guyton (August 21): Found all over the State. We do not have a record of its occurrence in Pike and Wayne Counties, but I strongly believe it is present in both those Counties.

Maryland — P. D. Sanders (August 22): This insect is moderately abundant.

West Virginia — L. M. Peairs (August 22): Moderately abundant, but less than usual, at Morgantown.

North Carolina — Z. P. Metcalf (August): Reported as very abundant over the whole State as reported by C. H. Brannon.

South Carolina — M. H. Brunson (August 29): This insect is unusually destructive over the entire area affected.

C. H. Brannon (August 20): Adult specimens received from Pamlico County.

Georgia — O. I. Snapp (August 16): Practically every patch of beans in Fort Valley has been seriously damaged. It has also caused considerable damage to the bean crop in Meriwether County.

Ohio — E. W. Mendenhall (July 21): There have been severe attacks in Columbus and vicinity. These do not seem general, but here and there some patches have been totally destroyed.

Indiana — J. J. Davis (August 27): Although reported destructive in several localities in southern Indiana, no new localities were recorded.

Mississippi — R. W. Harned (August 22): Serious injury to garden beans has been reported from Tippah, Benton, Itawamba, Alcorn, and Lee Counties. Soy beans at Corinth were also seriously injured. (August 28): Found in the following new localities: Hatley, Old Athens, Quincy, and Splunge by M. R. Smith and J. C. Harris.

Alabama — W. A. Ruffin (August 26): Moderately abundant at Auburn.

Utah — H. J. Pack (July 27): This insect is moderately abundant in the southern part of the State.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Mississippi — G. I. Worthington (August 22): This insect is generally present in Washington, Bolivar, Sunflower, and Coahoma Counties. Damage on beans and field peas noticeable, but not serious.

RED SPIDER (Tetranychus telarius L.)

Maryland — P. D. Sanders (August 23): The red spider is doing considerable damage to lima beans on the Eastern Shore.

CUCUMBERS AND MELONS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Indiana — J. J. Davis (August 27): Several reports of serious damage have been received recently.

Ohio — E. W. Mendenhall (July 31): Considerable damage is caused to cucumber and melon plants in Fairfield County.

Arkansas — D. Isely (August 22): This insect is very abundant.

PICKLE WORM (Diaphania nitidalis Stoll)

Indiana — J. J. Davis (August 1): Very abundant and destructive to pickles in Dearborn County.

Mississippi — R. W. Harned (August 22): Many complaints have been received during the past month in regard to injury to cantaloupes from practically every section of the State.

MELON APHID (Aphis gossypii Glov.)

Arizona — O. L. Barnes (August 16): This aphid is abundant in some fields near Phoenix and doing considerable damage to watermelons, especially late plantings.

Ohio — E. W. Mendenhall (July 31): Injury very severe on melons and cucumbers in Fairfield County.

Indiana — J. J. Davis (August 27): Reported during the month as destructive at North Salem, Thayer, and Macy. (A. cucumeris Forbes.)

SQUASH

SQUASH BORER (Melittia satyriniformis Hbn.)

Massachusetts — A. P. Morse (August 2): A severe outbreak has been reported near Salem.

ONIONS

ONION THRIPS (Thrips tabaci L.)

New York — Weekly News Letter, N. Y. State College of Agr., August 5: Doing considerable damage to onions in Orange County.

Illinois — C. C. Compton (August 7): More destructive to onions than at any time since 1921. Severely injured about an acre of cabbage adjoining onion fields where the onions had been harvested.

PEPPER

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

California — A. C. Davis (August 16): Several taken in a few minutes at Vista, but no estimate was made of actual numbers present per plant. This species seems to be moving northward in California.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Montana — W. B. Mabee (August 20): The beet leafhopper is scarce.

Idaho — C. Wakeland (August 20): Little injury to beets excepting in districts near the natural breeding grounds.

Nevada — G. G. Schweis (August 20): No commercial plantings of sugar beets this year.

Utah — G. F. Knowlton (August 11): Most parts of northern Utah are suffering very little from the beet leafhopper and curly top. The most severe curly-top damage in this section is at Thatcher, Hooper, Penrose, and Bothwell, and occasional fields in other districts. Leafhoppers are very abundant in some desert breeding areas on deserted dry farms.

H. J. Pack (July 27): Scarce to moderately abundant in beet sections.

MARGINED BLISTER BEETLE (Epicauta cinerea marginata Fab.)

Maryland — F. M. Wadley (August 1): Beets in a garden at Brandywine are almost defoliated in spots.

SWEET POTATO

A MOTH (Herse cingulata Fab.)

Mississippi — R. W. Harned (August 22): Larvae were collected at McComb from sweet-potato plants on July 23. The correspondent wrote that these insects ate up the vines of 6 acres of his sweet potatoes. Specimens were also found injuring sweet-potato plants at Kokomo, on July 24.

S O U T H E R N F I E L D - C R O P I N S E C T S

A Correction - The note on Epitrix parvula Fab. by N. Turner on page 251 of this volume of the Insect Pest Survey Bulletin relates to E. cucumeris Harr.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Florida — J. R. Watson (August 21): More abundant than a year ago.

Louisiana — W. E. Hinds (August 22): Generally much less abundant than the average. Third generation developing. Trichogramma minutum Riley now destroying about one-half of borer eggs in the southern part of the cane belt and increasing their control to nearly the maximum of 95 to 98 per cent in some fields where the wasps were colonized on second-generation eggs.

Texas — F. L. Thomas (August 23): Causing severe injury to late corn and also damaging cane, in the coastal section.

F O R E S T A N D S H A D E - T R E E I N S E C T S

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S.& A.)

Ohio — E. W. Mendenhall (August 2): Quite bad on shade trees on the State House grounds at Columbus.

Illinois — W. P. Flint (August 19): The first brood was quite abundant throughout central Illinois. This brood, however, was heavily parasitized and apparently the second brood will not be so numerous as the first.

A TUSSOCK MOTH (Hemerocampa pseudotsugata McD.)

Idaho — C. Wakeland (August 20): Large areas of Douglas fir in the Payette National Forestare being defoliated and killed. Lar-

vae and pupae collected are heavily parasitized by dipterous and hymenopterus insects which have not yet emerged. (Determined by C. Heinrich.)

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Washington, D.C. W. Middleton (August 2): The bagworm is extraordinarily abundant in this section.

West Virginia L. M. Peairs (August 1): The bagworm is very abundant in northern West Virginia.

South Carolina M. H. Brunson (August 29): The bagworm is moderately abundant on arborvitae at Greenville and Newbury.

Ohio E. W. Mendenhall (August 2): The attack of the bagworm in Fairfield and Pickaway Counties is quite severe.

Indiana J. J. Davis (August 1): Reported abundant at Winamac, Terre Haute, and Connersville. At the latter two places conifers were being attacked. Winamac is farther north than the usual occurrence of this insect. (August 27): Attacking rose and other shrubs and trees, including cedar, at Indianapolis, Richmond, Knightstown, and Cloverdale.

Illinois W. P. Flint (August 19): More reports of damage have been received this year than during the past season. Most of the reports come from west and southwest central Illinois. These insects have been on the increase in this part of the State for the last several years and are causing damage not only in towns, but also in the country.

Kentucky M. L. Didlake (August 27): Generally abundant, especially damaging evergreens.

Kansas J. W. McColloch (August): During the past month many reports of cedars being seriously injured have been received from Columbus, Wabaunsee, Princeton, Ottawa, and Redfield.

FALL WEBWORM (Hyphantria cunea Drury)

Massachusetts A. I. Bourne (August 23): We are finding at the present time, very generally over the State, that the fall webworm is decidedly more abundant and conspicuous than it has been for several years.

Connecticut M. P. Zappe (August 24): Very abundant along roadsides in the western half of the State on hickory, ash, cherry, etc.

New York Weekly News Letter, N. Y. State College of Agr., August 19: Common in Niagara County.

Missouri — L. Haseman (August 26): Has appeared in great numbers all over the State and has apparently shown a particular liking for the foliage of walnut, though it is attacking the fruit, forest, and shade trees generally.

BIRCH

YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Nebraska — M. H. Swenk (July 15-August 1): A white birch tree on a lawn in Burt County was stripped during the last week in July.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Boisd.)

Indiana — J. J. Davis (August 1): Caterpillars were observed defoliating trees more or less generally in the southern half of the State. (August 27): Observed as abundant at Romney, Richmond, and LaFayette during the month.

CATALPA MIDGE (Itonidia catalpae Comst.)

Indiana — J. J. Davis (August 27): The catalpa midge was abundant and destructive at Huntington as reported August 22.

ELM

SPINY ELM CATERPILLAR (Euvanessa antiopa L.)

Ohio — E. W. Mendenhall (August 15): The spiny elm caterpillar was found feeding on young elm in a nursery at Tippecanoe City.

EUROPEAN ELM SCALE (Gossyparia spuria Modeer)

Kansas — J. W. McColloch (July 26): A bad infestation was found at Goodland the latter part of July.

SWEET GUM

HICKORY HORNED DEVIL (Citheronia regalis Fab.)

Indiana — J. J. Davis (August 27): Sent in from Mommisky August 9 on sweet gum, from Aurora August 19, from Petersburg August 24 on maple, and from Greenfield August 24.

HICKORY

PHYLLOXERA (*Phylloxera* spp.)

Ohio — E. W. Mendenhall (August 2): I found hickory leaf galls quite numerous in a locality near canal at Winchester.

JUNIPER

JUNIPER WEBWORM (*Dichomeris marginellus* Fab.)

Maryland — P. D. Sanders (August 22): Reported from Elkton August 1.

LINDEN AND MAPLE

LINDEN LACEBUG (*Gargaphia tiliae* Walsh)

Kentucky — J. J. Davis (August 27): The linden lacebug was observed very abundant and destructive to lindens at Louisville the last of July.

COTTONY MAPLE SCALE (*Pulvinaria vitis* L.)

Ohio — E. W. Mendenhall (August 2): The cottony maple scale has broken out several times on lindens and maples at Columbus.

PINE

SOUTHERN PINE BEETLE (*Dendroctonus frontalis* Zimm.)

North Carolina — R. A. St. George (August 5): This insect attacked second-growth shortleaf pines near the Bent Creek laboratory of the Pisgah National Forest, the first week of July. Trees from $2\frac{1}{2}$ to 15 inches thick and from 20 to 40 feet high were attacked. This infestation seems to show correlation between abundance of beetles and weather conditions. A heavy brood overwintered and a big spring emergence was anticipated, but excess of rainfall from February to May caused heavy mortality by drowning the beetles in the galleries. During June and early July the rainfall was reduced to normal followed by a deficiency in late July, which possibly caused the above attack. Dying pines have been reported in several States in the southeastern and southern sections during July. Hymenopterous parasites have been very abundant ovipositing in the beetle larvae and this will result in their death when the parasite larvae mature.

SAP BEETLES (*Ips* spp.)

Washington, D.C. — W. Middleton (August 2): *I. calligraphus* Germ. and *I.*

grandicollis Eich. are killing pines around Washington more frequently than normally.

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Connecticut — R. B. Friend (August): Injury appears unusually abundant throughout the State this year.

PINE BUTTERFLY (Neophasia menapia Feld.)

Idaho — C. Wakeland (August 20): Adults of the pine butterfly are quite abundant over large areas of the Payette National Forest and in that general district, indicating that they may reach the epidemic stage in another year or two.

NANTUCKET PINE MOTH (Rhyacionia frustrana Comst.)

Mississippi — R. W. Harned (August 22): A correspondent at Lyons sent specimens to us on August 14 with the information that these insects were seriously injuring pine trees on his property.

Nebraska — M. H. Swenk (July 15-August 1): A pine planting in Kimball County was found shortly after the middle of July to be infested with R. frustrana bushnelli.

SPRUCE

SPRUCE BUDWORM (Harmologa fumiferana Clem.)

Minnesota — A. D. Aldrich (August 17): Moderately abundant, many spruce having been killed at Carlton.

SYCAMORE

SYCAMORE LACEBUG (Corythucha ciliata Say)

Mississippi — R. W. Harned (August 22): Specimens were found on sycamore at Picayune on July 24. The infestation was light.

TULIP

TULIP TREE SCALE (Toumeyella liriodendri Gmel.)

Maryland — P. D. Sanders (August 22): Reported from Hagerstown August 16 and from Annapolis August 10.

Indiana — J. J. Davis (August 1): Abundant on tulip or yellow poplar at Elberfeld and Henryville.

WALNUT

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Pennsylvania — T. L. Guyton (August 21): On an automobile trip from Harrisburg to Philadelphia, severe oubreaks were noticed practically all the way through. One may safely report this from Dauphin, Lebanon, Berks, and Montgomery Counties. In many instances the walnut trees were stripped.

Washington, D.C. — W. Middleton (August 2): Seems to be more abundant than usual around Washington.

Indiana — J. J. Davis (August 1): Abundant at Bloomfield and LaFayette.

I N S E C T S A T T A C K I N G G R E E N H O U S E A N D O R N A M E N T A L P L A N T S

RED SPIDER (Tetranychus telarius L.)

Indiana — J. J. Davis (August 27): Abundant on ornamentals, especially cedar, at Scottsburg and Evansville, early in August.

Ohio — E. W. Mendenhall (August 2): Found some raspberry plantations in Fairfield County infested. Some damage was being done. (August 5): Many of the shade and fruit trees in Springfield are affected, such as maple, willow, oak, and apple.

Illinois — W. P. Flint (August 19): Many reports are received daily concerning damage by various mites to foliage of flowering plants and shade trees, particularly evergreens.

Kentucky — M. L. Didlake (August 27): Seems to be as abundant and harmful on hydrangea, weigela, and morning-glory during periods of heavy rains as during drought at Lexington.

Kansas — J. W. McColloch (August 14): Reported as very abundant on elms at Hill City.

Mississippi — R. W. Harned (August 22): Serious injury to crepe myrtle was reported from Moss Point on August 17.

WHITE GRUBS (Phyllophaga spp.)

New Hampshire — P. R. Lowry (August): White grubs are severely infesting a very large new rose greenhouse at Dover, where many bushes have been killed. The larvae were brought in with the soil.

BLISTER BEETLES (Meloidae)

Ohio — E. W. Mendenhall (July 31): Blister beetles, both the black, Epicauta pennsylvanica DeG., and the gray, E. cinerea Forst., are doing considerable damage to aster and gladiolus flowers in Fairfield County.

Nebraska — M. H. Swenk (July 15-August 1): Numerous reports of injury by blister beetles came in during this period from over most of southeastern Nebraska, mostly Epicauta cinerea Forst. and Macrobasis immaculata Say.

MEALY PLATA (Ormenis pruinosa Say)

Massachusetts — A. P. Morse (August 2): There is a great abundance of lightning lantern flies on various cultivated shrubs, notably Aralia pentaphylla, red osier dogwood, Boston ivy, woodbine, etc., near Salem. No noticeable injury yet, but annoyance to to householders.

ASTER

CHRYSANTHEMUM LACEBUG (Corythucha marmorata Uhl.)

New Hampshire — P. R. Lowry (August): Seriously injuring New England asters in a garden at Durham.

CANNA

LESSER CANNA LEAF ROLLER (Geshna cannalis Quaint.)

Mississippi — R. W. Harned (August 22): Serious injury to cannas has been reported from many sections of the State recently.

CHRYSANTHEMUM

GREENHOUSE CENTIPEDE (Scutigerella immaculata Newp.)

Michigan — R. H. Pettit (July 29): The greenhouse centipede has arrived in Michigan and has done serious damage in one greenhouse at Mt. Clemons to a crop of chrysanthemums.

COLUMBINE

COLUMBINE BORER (Papaipema purpurifascia G. & R.)

New Hamsphire — P. R. Lowry (August): A number of columbine plants in a flower garden have been injured.

CREPE MYRTLE

CREPE MYRTLE APHID (Myzocallis kahawaluokalani Kirkaldy)

Mississippi — R. W. Harned (August 22): Aphids identified by Mr. A. L. Hamner as this species, were found infesting crepe myrtle at Columbia, Pascagoula, Meridian, and Port Gibson recently.

IRIS

IRIS BORER (Macronoctua onusta Grote)

Kentucky — M. L. Didlake (August 27): The iris borer has been found injuring iris at Lexington, Louisville, and Mayffeld.

LARKSPUR

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Indiana — J. J. Davis (August 27): Reported as very destructive to larkspur at Franklin on August 1.

LILAC

LILAC BORER (Podosesia syringae Harr.)

Indiana — J. J. Davis (August 27): Reported damaging lilac at Crown Point and Evansville early in August.

VIOLETS

VIOLET SAWFLY (Emphytus canadensis Kby.)

Washington — R. F. Kern (August 17): Practically every plant in one planting of about 25 violet plants at Olympia was infested. The only other record I have of these in western Washington is one case in Aberdeen in 1928 and 1929, although no systematic search has been made.

INSECTS ATTACKING MAN AND DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicidae)

Missouri — L. Haseman (August 26): Mosquitoes have been unusually annoying in spite of the drought in central Missouri since the middle of August near ponds, streams, and springs.

CHIGGER (Trombicula irritans Riley)

Missouri — L. Haseman (August 26): During the month, probably owing to heat and lack of moisture, the chigger problem has largely cleared up.

FLEAS (Ctenocephalus spp.)

Connecticut — B. H. Walden (August): More abundant in New Haven and Hartford Counties than last year on cats, dogs, and people.

Illinois — W. P. Flint (August 19): Many reports of fleas are being received. Several communities in the central part of the State have reported practically every farm infested.

Nebraska — M. H. Swenk (July 15-August 1): Cases of infestation of houses with the dog flea were reported during the last of July from all over southeastern Nebraska.

CATTLE

HORN FLY (Haematobia irritans L.)

Missouri — L. Haseman (August 26): Horn flies continue to be very troublesome but less so during August.

STABLE FLY (Stomoxys calcitrans L.)

Missouri — L. Haseman (August 26): Very troublesome, but they have been less so during August.

Nebraska — M. H. Swenk (July 15-August 1): The biting stable fly continued to be the subject of inquiry because of its severe annoyance to livestock during the period here covered.

HORSE

HORSE FLIES (Tabanidae)

Missouri — L. Haseman (August 26): Horse flies, the common brown species and greenheads, have rapidly disappeared, but the large black species is still abundant.

SHEEP

SHEEP BOTFLY (Oestrus ovis L.)

Arizona — O. L. Barnes (August 16): Heavy infestations of the sheep botfly in a flock of sheep at Buckeye. The sheep had been shipped from Ashfork earlier in the summer. Of about 9,000 sheep in the flock, 1,200 died from some cause. The heads of 8 dead animals were examined and bots were found in each, averaging 6 bots to the head. Many bots were taken from living animals, according to the foreman in charge of the ranch. We did not see the animals, but specimens of the larvae of the parasite were brought to the office for identification.

H O U S E H O L D A N D S T O R E D -

P R O D U C T S I N S E C T S

TERMITES (Reticulitermes spp.)

Kansas — J.W. McColloch (August 22): Injury reported August 6 from several places at Wichita and damage to woodwork in a house at Kiowa reported August 10, and it was reported on August 20 that a granary had been ruined at Cawker City.

Idaho — C. Wakeland (August 20): Two widely separated instances of severe termite injury have come to our attention during the month. In one instance timbers under large buildings are being destroyed and in another timbers in a granary have been so weakened that the owner can not use the granary to capacity for the year's crop.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

Mississippi — R. W. Harned (August 28): New infestations have been found in the following places: Zama, Hatley, Nettleton, Quincy, Byram, 4½ miles northeast of Aberdeen, 2 miles north of Amory, 5 miles north of Aberdeen, 4 miles northwest of Jackson.

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella Oliv.)

Virginia — W. A. Sherman (August 27): This insect is very much more

abundant than usual throughout this part of the country. I have a field of about 20 acres at McLean and found this insect in it between harvest and threshing. The moths are seen flying about the barns.

CIGARETTE BEETLE (Lasioderma serricorne Fab.)

Iowa

C. J. Drake (August 29): This beetle is quite common in the State and widely distributed. Most reports of injury are limited to attacks on overstuffed furniture, and in many cases the stuffing has been totally destroyed by this pest.